

AMENDMENTS TO THE CLAIMS

The claims of the application have been amended as follows. The matter added to the claims is underlined; the matter deleted from the claims is lined through.

1 1-25 (Cancelled).

1 26. (Previously presented) A system for ligation of internal hemorrhoids in the anal
2 canal with the hemorrhoids at the traditional anatomical positions of the hemorrhoids in
3 the human body, comprising:

4 an anoscope, a multiple rubber band ligator device and a loading cone device,
5 said anoscope is configured with an elongated cylinder having a distal end for
6 insertion in an anal canal and a proximal end for positioning at the entrance of the anal
7 canal with three multiple apertures formed about the cylinder and extending from said
8 distal end along approximately one-half the length of the cylinder at positions about the
9 hollow cylinder for simultaneously exposing hemorrhoids in the anal canal at the normal
10 anatomic locations of the hemorrhoids in a patient without repositioning the anoscope
11 and permitting simultaneous access through said apertures to the normal locations for
12 internal hemorrhoids of the anal canal, and presenting the non-apertured portion of the
13 cylinder to the entrance to the anal canal;

14 a handle mounted to said cylinder at a predetermined position with respect to said
15 apertures such that by orienting said handle with respect to the patient the apertures are
16 oriented at the anatomical positions of hemorrhoids of the patient,

17 wherein the ligator device is configured to store multiple rubber bands on an inner
18 cylinder and further configured to release a single rubber band at a time from the inner
19 cylinder; and

20 wherein the modified loading cone is configured for attachment to the removable
21 inner cylinder to facilitate loading of rubber bands onto said inner cylinder.

1 27. (Previously presented) The system of claim 26, wherein
2 said apertures of said anoscope each have a width approximately equivalent to
3 one-sixth of the circumference of the cylinder of the anoscope, and
4 said three apertures being spaced apart about said cylinder to be at the three
5 o'clock, seven o'clock and eleven o'clock positions about the cylinder when the cylinder
6 is inserted in the anal canal with the handle oriented in the twelve o'clock position.

1 28. (Original) The system of claim 26, wherein the ligator device is comprised of an
2 inner cylinder, an outer cylinder, a central rod, an outer rod, and a firing handle.

1 29. (Original) The system of claim 28, wherein the inner cylinder and the outer
2 cylinder are detachably affixed, the outer cylinder and the outer rod are fixedly attached,
3 and the central rod is secured to the firing handle, such that movement of the firing handle
4 withdraws the central rod, which in turn withdraws the inner cylinder and a single rubber
5 band is released from the inner cylinder.

1 30. (Original) The system of claim 28, wherein the inner cylinder is configured for
2 removal for reloading with multiple rubber bands and replacement within the ligator
3 device for reuse.

1 31. (Original) The system of claim 28, wherein the inner cylinder is configured for
2 removal after firing of said multiple rubber bands and replacement with another
3 preloaded inner cylinder.

1 32. (Previously presented) The system of claim 28, wherein the inner cylinder is
2 configured with a shoulder against which a disposable inner cylinder sleeve is abutted;
3 the disposable inner cylinder sleeve configured to surround said inner cylinder;
4 the disposable inner cylinder sleeve configured with one or more premounted
5 rubber bands; and

6 the disposable inner sleeve configured for removal and replacement after firing of
7 the rubber bands with another preloaded disposable inner cylinder sleeve.

1 33. (Original) The system of claim 29, wherein the central rod is secured to the firing
2 handle with a spring clip, so that when the spring clip is released, the central rod is
3 retracted and the inner cylinder is withdrawn within the outer cylinder and rubber bands
4 are released from the inner cylinder.

1 34. (Original) The system of claim 29, wherein the central rod is secured to the firing
2 handle with a ratcheting mechanism, said ratcheting mechanism comprising serrations
3 along a proximal end of the central rod, a first spring used to withdraw the serrated
4 central rod and a second spring used to stabilize and prevent forward slippage of the
5 central rod, so that when the firing handle is activated, the central rod is retracted and the
6 inner cylinder is withdrawn within the outer cylinder and rubber bands are released from
7 the inner cylinder.

1 35. (Previously presented) The system of claim 26, wherein the loading cone is
2 configured with a tapered front section and a shouldered recess which receives the inner
3 cylinder to facilitate the loading of multiple rubber bands onto the inner cylinder.

1 36-54. (Cancelled)

2
3 55. (Previously presented) A system for ligation of internal hemorrhoids comprising:
4 an anoscope,
5 a multiple rubber band ligator device, and
6 a loading device for loading rubber bands on said ligator device,
7 said ligator device being configured to store multiple rubber bands on an inner
8 cylinder and further configured to release a single rubber band at a time from the inner
9 cylinder;

10 said loading device being configured for loading of rubber bands onto said inner
11 cylinder,

12 said anoscope including a cylinder having a distal end for insertion in the anal canal
13 and a proximal end for positioning exteriorly of the anal canal,

14 said cylinder defining three lateral apertures extending along said cylinder
15 opening from the distal end of said cylinder toward the proximal end of the cylinder,

16 said apertures being spaced apart about said cylinder to be positionable at the
17 three o'clock, seven o'clock and eleven o'clock positions about the cylinder when
18 inserted in the anal canal with the patient in the supine position, and

19 said lateral apertures each being one-sixth of the circumference of the cylinder
20 such that the sizes of the hemorrhoids can be visually graded by the observer by the
21 degree of extension of the hemorrhoids from outside the cylinder through the apertures of
22 the anoscope.

1 56. (Cancelled)

1 57. (Previously presented) The system of claim 55, wherein said cylinder is tapered at
2 its distal end.

1 58. (Previously presented) The system of claim 55, wherein said apertures extend
2 approximately half-way along the length of said cylinder.

1 59. (Previously presented) The system of claim 55, wherein said apertures extend not
2 more than half-way along the length of said cylinder to expose only internal hemorrhoids
3 in the anal canal.

1 60. (Previously presented) The system of claim 55, and further including a flange
2 extending radially from the proximal end of said cylinder.

1 61. (Previously presented) The system of claim 60, and further including a handle
2 extending from said flange, said handle oriented with respect to said cylinder to be
3 positioned at the twelve o'clock position when said apertures are at the three o'clock,
4 seven o'clock and eleven o'clock positions about the cylinder and when inserted in the
5 anal canal with the patient in the supine position.

1 62. (Previously presented) The system of claim 61, wherein said handle incorporates
2 a housing for the attachment of an external light source and a fiber optic cable that
3 transmits light into the cylinder of said anoscope.

1 63. (Cancelled)

1 64. (Previously presented) The system of claim 61, wherein said handle is oriented on
2 said flange to be in the six o'clock position when the openings in the cylinder are oriented
3 in the nine o'clock, one o'clock and five o'clock positions with the patient in the prone
4 position.

1 65. (Cancelled)

1 66. (Currently amended) In combination with a ligator and a loading device, an
2 anoscope for ligation of internal hemorrhoids comprising:

3 a cylinder having a distal end for insertion in the anal canal and a proximal end for
4 positioning exteriorly of the anal canal,

5 said cylinder defining three lateral apertures opening from the distal end of said
6 cylinder toward the proximal end of said cylinder, said apertures being spaced apart about
7 said cylinder to be positionable at the three o'clock, seven o'clock and eleven o'clock
8 positions about the cylinder when inserted in the anal canal with the patient in the supine
9 position for exposing three areas of the anal canal that have internal hemorrhoids,

said apertures being formed at a predetermined size to observe the size of the hemorrhoids by the extension of the hemorrhoids from outside said cylinder and through the apertures, and

wherein said apertures extend approximately half-way along the length of said cylinder to expose internal hemorrhoids while the rest of the cylinder tends to hold other features of the anal canal outside the cylinder, and

visual means at said proximal end of said cylinder for visually rotatively orienting said anoscope with the apertures of said cylinder oriented in the anal canal with the apertures in registration with the hemorrhoid positions of man.

67. (Currently amended) The combination of claim 66, and wherein said visual means comprises a handle.

68. (Previously presented) The combination of claim 66, wherein said cylinder is tapered at its distal end.

69. (Cancelled)

70. (Currently amended) In combination with a ligator and a loading device, an anoscope for ligation of internal hemorrhoids comprising:
a cylinder having a distal end for insertion in the anal canal and a proximal end for positioning exteriorly of the anal canal,

said cylinder defining three lateral apertures opening from the distal end of said cylinder toward the proximal end of said cylinder, said apertures being spaced apart about said cylinder to be positionable at the three o'clock, seven o'clock and eleven o'clock positions about the cylinder when inserted in the anal canal with the patient in the supine position for exposing three areas of the anal canal that have internal hemorrhoids,

said apertures being formed at a predetermined size to observe the size of the hemorrhoids by the extension of the hemorrhoids from outside said cylinder and through the apertures,

13 visual means at said proximal end of said cylinder for visually rotatively orienting
14 said anoscope with the apertures of said cylinder oriented in the anal canal with the
15 apertures in registration with the hemorrhoid positions of man,

16 ~~The combination of claim 66~~, wherein said apertures extend not more than half-
17 way along the length of said cylinder to expose only internal hemorrhoids in the anal
18 canal.

1 71. (Previously presented) The combination of claim 66, and further including a
2 flange extending radially from the proximal end of said cylinder.

1 72. (Previously presented) The combination of claim 71, wherein said handle extends
2 from said flange.

1 73. (Previously presented) The combination of claim 72, wherein said handle
2 incorporates a housing for the attachment of an external light source and a fiber optic
3 cable that transmits light into the cylinder of said anoscope.

1 74. (Cancelled)

1 75. (Currently amended) ~~The combination of claim 72~~, In combination with a ligator
2 and a loading device, an anoscope for ligation of internal hemorrhoids comprising:
3 a cylinder having a distal end for insertion in the anal canal and a proximal end for
4 positioning exteriorly of the anal canal,
5 said cylinder defining three lateral apertures opening from the distal end of said
6 cylinder toward the proximal end of said cylinder, said apertures being spaced apart about
7 said cylinder to be positionable at the three o'clock, seven o'clock and eleven o'clock
8 positions about the cylinder when inserted in the anal canal with the patient in the supine
9 position for exposing three areas of the anal canal that have internal hemorrhoids,

10 said apertures being formed at a predetermined size to observe the size of the
11 hemorrhoids by the extension of the hemorrhoids from outside said cylinder and through
12 the apertures,

13 visual means at said proximal end of said cylinder for visually rotatively orienting
14 said anoscope with the apertures of said cylinder oriented in the anal canal with the
15 apertures in registration with the hemorrhoid positions of man,

16 a flange extending radially from the proximal end of said cylinder,

17 a handle extending from said flange,

18 wherein said handle being is oriented on said flange to be in the six o'clock position when
19 the openings in the cylinder are oriented in the nine o'clock, one o'clock and five o'clock
20 positions with the patient in the prone position.

1 76. (Currently amended) ~~The combination of claim 66,~~ In combination with a ligator
2 and a loading device, an anoscope for ligation of internal hemorrhoids comprising:

3 a cylinder having a distal end for insertion in the anal canal and a proximal end for
4 positioning exteriorly of the anal canal,

5 said cylinder defining three lateral apertures opening from the distal end of said
6 cylinder toward the proximal end of said cylinder, said apertures being spaced apart about
7 said cylinder to be positionable at the three o'clock, seven o'clock and eleven o'clock
8 positions about the cylinder when inserted in the anal canal with the patient in the supine
9 position for exposing three areas of the anal canal that have internal hemorrhoids,

10 said apertures being formed at a predetermined size to observe the size of the
11 hemorrhoids by the extension of the hemorrhoids from outside said cylinder and through
12 the apertures, visual means at said proximal end of said cylinder for visually rotatively
13 orienting said anoscope with the apertures of said cylinder oriented in the anal canal with
14 the apertures in registration with the hemorrhoid positions of man,

15 wherein said openings in said cylinder each extend about said cylinder
16 approximately 1/6 of the cylinder circumference.

1 77. (Previously presented) In combination, a ligator, a loading device for loading
2 bands on the ligator, and an anoscope for receiving the ligator for ligation of internal
3 hemorrhoids of the anal canal of a patient, the anoscope including:

4 a cylinder having a distal end for insertion in the anal canal and a proximal end for
5 positioning exteriorly of the anal canal,

6 said cylinder defining three lateral apertures opening about one-half the distance
7 from the distal end of said cylinder toward the proximal end of said cylinder, said three
8 apertures being spaced apart about said cylinder to register with the internal hemorrhoids
9 in the normal anatomic location of man,

10 a handle extending radially away from the proximal end of the cylinder at a
11 predetermined angle with respect to the apertures of the cylinder such that when the
12 cylinder is inserted in the anal canal of the patient and the handle is oriented at a
13 predetermined attitude with respect to the patient the apertures of the cylinder register
14 with the internal hemorrhoids of the patient.